

2002 KINDERGARTEN RETROSPECTIVE SURVEY RESULTS
DEPARTMENT OF HEALTH SERVICES, IMMUNIZATION BRANCH
October 1, 2002

The kindergarten retrospective survey (KRS) is an annual survey that provides state and regional estimates of vaccination coverage among kindergarten children as of their second birthday. This report presents KRS findings for 2002, which indicates that vaccination coverage levels among California children continue to improve. Varicella coverage level at the time of kindergarten entry is 95.3%. The biggest vaccination coverage increases (5.9%) occurred among African American children this year.

The 2002 KRS was conducted in 3% of the state's kindergartens (n=212) in concurrence with the 2002 Spring Selective Review (SR). Vaccination information was extracted from every sixth school immunization record (blue card) from each of the 212 kindergartens participating in the SR. Most of the 2,268 children sampled were born in 1996. There were 4 permanent medical exemptions (PMEs) and 25 personal belief exemptions (PBEs) in the sample.

Compared with the results of the 2001 KRS, the 4:3:1 series (four or more doses of DTP, three or more doses of poliovirus vaccine, and one or more doses of any measles-containing vaccines – MCV) coverage level at 24 months of age increased 1.2% points from 71% in 2001 to 72.2% in 2002, and coverage increased at least 1% point for each of the antigens in the series. Hepatitis B improved from 86.2% in year 2001 to 88.3% in year 2002 (Table 1). None of these increases were statistically significant.

As of July 1, 2001, one dose of varicella (chickenpox) vaccine or physician-documented disease and/or immunity has been required for entry into childcare and kindergarten. This is the first cohort of kindergarten students who were subjected to the varicella requirement. Varicella coverage level for these children was 82.3% at their second birthday, but was 95.3% by the time they were 5 years old.

At the state level, coverage with the 4:3:1 series among African American children increased from 58.3% to 64.2% in 2002 (Table 2). Despite this improvement among African American children, coverage is still lower at each age check point when compared with other racial/ethnic groups (Table 3).

Four regions (Los Angeles Co, Other Southern California, San Francisco/Bay area, and Central Coast) showed improvement in the 4:3:1 series. The Central Valley, the North Central Valley and Rural California showed no change in coverage. None of these differences are statistically significant (Table 4).

The general trend in increasing vaccination coverage is continuing to move us toward the Healthy People 2010 goal of 90%. The striking improvement of African American immunization coverage is encouraging, although, there is still much work to be done in this area; this group's coverage is still lower than other racial/ethnic groups.

Comparisons with the equivalent year in the National Immunization Survey validate the results of the Kindergarten Retrospective Survey (Table 5).

Attachment Tables:

Enclosed is a full set of tables showing the 2002 KRS results. Tables 1 & 2 compare results from 1999 ~ 2002 KRS. Table 3 compares immunization levels of children by race and age checkpoint. Table 4 shows immunization rates by race/ethnicity and region. Table 6 provides similar data broken down by age checkpoint. Table 5 is a comparison of estimates reported by the National Immunization Survey and the 2002 Kindergarten Retrospective Survey. Table 6 shows yearly comparisons of up-to-date for 4:3:1 series at 2nd birthday by regions. Table 7 provides coverage by age checkpoints. Table 8 shows immunization levels by race/ethnicity and antigen at the second birthday. Table 9-11 provide immunization coverage information specific to birthplace, type of record presented, for hepatitis B, and varicella, respectively. Table 12-15 are confidence intervals for the various tables and figures presented. Figures 1-5 are graphic representations of the above data. For further information, please contact Nadine Wei at (510)540-2993 or Nwei@dhs.ca.gov, or Madina Sharifi at (510)540-3147 or MSharifi@dhs.ca.gov at the Department of Health Services, Immunization Branch.

KINDERGARTEN RETROSPECTIVE SURVEY

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TABLE 1: 4:3:1 Vaccine Series* Coverage Levels among Kindergarteners at 2nd Birthday by Vaccine Type, 1999-2002

VACCINE TYPE	2002 N= 2,268	2001 N= 2,306	2000 N= 1,737	1999 N=2,072
FULL SERIES OF 3 POLIO, 4 DTP, & 1 MMR	72.2%	71.0%	66.6%	63.9%
Polio (3+)	92.8	91.5	92.2	86.6
DTP/Td (4+)	79.6	78.0	75.7	73.6
MMR (1+)	85.6	84.7	81.9	80.2
HEP B (3+): [not part of full series]	88.3	86.2	83.3	76.7
Hib (1+): [not part of full series]	97.3	97.2	97.3	84.0

TABLE 2: 4:3:1 Vaccine Series* Coverage Levels among Kindergarteners at 2nd Birthday by Race/Ethnicity, 1999-2002

RACE/ETHNICITY	2002		2001		2000		1999	
	Total Number	Percent UTD	Total Number	Percent UTD	Total Number	Percent UTD	Total Number	Percent UTD
ALL RACES/ETHNIC GROUPS	2,268	72.2	2,306	71.0	1,737	66.6	2,072	63.9
White	651	73.0	733	72.4	555	70.3	725	68.3
Hispanic	1,170	72.0	1,016	71.2	802	65.6	919	60.4
African-American	106	64.2	187	58.3	158	54.4	158	55.1
Asian	241	76.8	232	76.7	113	72.6	165	70.9
Other	47	68.1	43	55.8	70	70.0	54	72.2
Unknown	53	66.0	95	75.8	39	59.0	51	58.8

*Four or more doses of DTP/DT/DTaP, three or more doses of poliovirus vaccine, and one or more doses of measles-containing vaccine (MCV).

KINDERGARTEN RETROSPECTIVE SURVEY
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TABLE 3: IMMUNIZATION LEVELS OF CALIFORNIA KINDERGARTENERS¹
BY RACE/ETHNICITY AND AGE CHECKPOINT², 2002

RACE (N) % of total	3 mo. 1 Polio, 1 DTP	6 mo. 1 Polio or 1 DTP	7 mo. 2 Polio, 3 DTP	12 mo. 2 Polio, 3 DTP	19 mo. 3 P., 4 DTP, 1 MMR	UTD at all checkpts ⁴	24 mo 3 P., 4 DTP, 1 MMR	27.5 mo. ⁵ 3 P., 4 DTP, 1 MMR	3 yrs. 3 P., 4 DTP, 1 MMR
ALL RACES (2,268) ² 100.0%	84.4% ⁴	95.5%	62.4%	86.8%	60.2%	43.3%	72.2%	77.1%	81.2%
White (651) 28.7%	86.0%	95.6%	68.7%	86.6%	58.8%	46.9%	73.0%	77.7%	81.7%
Hispanic (1,170) 51.6%	82.7%	95.5%	57.5%	86.4%	60.8%	40.5%	72.0%	77.4%	81.5%
African American (106) 4.7%	83.0%	93.4%	51.9%	79.3%	50.0%	34.0%	64.2%	68.9%	77.4%
Asian (241) 10.6%	88.4%	97.5%	74.7%	93.8%	69.3%	54.4%	76.8%	80.5%	82.2%
Other (47) 2.1%	76.6%	87.2%	63.8%	83.0%	55.3%	40.4%	68.1%	72.3%	78.7%
Unknown (53) 2.3%	92.5%	96.2%	58.5%	84.9%	47.2%	30.2%	66.0%	69.8%	75.5%

1. Born in 1996

2. Confidence Intervals available in tables 12-15

3. Sample includes 29 children with exemptions

4. UTD stands for up-to-date

5. CDC's National Immunization Survey includes all children in the age range 19 through 35 mos. A retrospective survey can approximate that sampling scheme by using the median age which is 27.5 mos.

KINDERGARTEN RETROSPECTIVE SURVEY
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TABLE 4: 4:3:1 VACCINE SERIES COVERAGE LEVELS OF CALIFORNIA KINDERGARTENERS AT 24 MONTHS OF AGE:
BY RACE/ETHNICITY AND REGION², 2002

RACE (N) % of total	ALL REGIONS ³ (N =2,268)	LA Co. (624)	Other SoCal (702)	SF Bay Area (373)	Central Coast (172)	Central Valley (126)	North Central Valley (149)	Rural NorCal (122)
ALL RACES (2,268) ² 100.0%	72.2%	72.8%	71.5%	79.1%	69.2%	69.1%	69.1%	63.1%
White (651) 28.7%	73.0%	71.0%	74.9%	82.6%	71.4%	47.5%	76.9%	59.1%
Hispanic (1,170) 51.6%	72.0%	74.1%	67.9%	80.5%	71.1%	79.2%	65.8%	72.7%
African American (106) 4.7%	64.2%	n/a ³	77.8%	57.1%	n/a ⁴	n/a ⁴	n/a ⁴	n/a ⁴
Asian (241) 10.6%	76.8%	69.8%	82.5%	79.1%	n/a ⁴	n/a ⁴	n/a ⁴	n/a ⁴
Other & Unkn. (100) 4.4%	67.0%	70.4%	n/a ⁴	n/a ⁴	n/a ⁴	n/a ⁴	n/a ⁴	n/a ⁴

1. Born in 1996

2. Confidence Intervals available in tables 12-15

3. Sample includes 29 children with exemptions

4. Percents are not calculated on a base of fewer than 25 children

5. Regions do not exactly match Field Rep assigned regions

REGION ⁵	COUNTIES
Los Angeles	Los Angeles
Other So. Cal.	Imperial, Orange, Riverside, San Bernardino, San Diego
SF Bay Area	Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, Sonoma
Central Coast	Monterey, San Luis Obispo, Santa Barbara, Santa Cruz, Ventura
Central Valley	Fresno, Kern, Kings, Madera, Merced, Tulare
No. Central Valley	Sacramento, San Joaquin, Stanislaus
Rural No. Cal.	Alpine, Amador, Butte, Calaveras, Colusa, Del Norte, El Dorado, Glenn, Humboldt, Inyo, Lake, Lassen Mariposa, Mendocino, Modoc, Mono, Nevada, Placer, Plumas, San Benito, Shasta, Sierra, Siskiyou, Sutter, Tehama, Trinity, Tuolumne, Yolo, Yuba

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TABLE 5: COMPARISON OF 2002 KINDERGARTEN RETROSPECTIVE
SURVEY(KRS) AND 1998 NATIONAL IMMUNIZATION SURVEY (NIS) RESULTS¹

ANTIGEN	Percent of California children up-to-date		Percent of California children up-to-date		Percent of California children up-to-date	
	1998	2002	1997	2001	1996	2000
	NIS ²	KRS	NIS ²	KRS	NIS ²	KRS
	(19 to 35 mo. age)	(27.5 mo. checkpoint)	(19 to 35 mo. age)	(27.5 mo. checkpoint)	(19 to 35 mo. age)	(27.5 mo. checkpoint)
Polio (3+)	88.4	94.7	90	93.0	91.0	93.5
DTP (4+)	81.6	85.0	79	82.7	81.0	80.7
MMR (1+)	91.2	97.7	89	86.8	90.0	83.9
Hib (3+)	91.7	98.1	91	97.0	90.0	n/a
Hep B (3+)	87.1	90.0	83	87.7	82.0	83.0
4:3:1 series	77.7 (74.0 - 81.4)	77.1 (75.4 - 78.8)	76.2 (72.5-79.9)	75.0 (73.2-76.8)	75.7 (72.0 - 79.4)	71.0 (69.1 - 73.0)
4:3:1:3(3+ Hib) series	75.9 (72.1 - 79.7)	76.9 (75.2 - 78.6)	74.2 (70.4-78.0)	74.7 (73.0-76.5)	73.6 (69.8 - 77.4)	

1. Kindergarteners in this year's sample were approximately 2 years old in 1998. The KRS approximates the NIS's sample age range (19 to 35 months old) by using the median age which is 27.5 months.

2. CDC National Immunization Survey, retrieved from <http://www.cdc.gov/nip/coverage>

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TABLE 6: 4:3:1 VACCINE SERIES COVERAGE LEVELS of CALIFORNIA KINDERGARTENERS at 2nd Birthday
By Region, 1997-2002

	2002		2001		2000		1999		1998		1997	
REGION	Total Number	Percent UTD	Total Number	Percent UTD	Total Number	Percent UTD	Total Number	Percent UTD	Total Number	Percent UTD	Total Number	Percent UTD
ALL REGIONS	2,268	72.2	2,306	71.0	1,737	66.6	2,072	63.9	2,105	62.9	2,160	59.2%
Los Angeles Co.	624	72.8	663	70.0	559	64.6	629	59.8	518	62.9	667	56.2
Other So. Calif.	702	71.5	654	69.9	374	66.0	588	63.8	599	64.3	631	59.3
SF Bay Area	373	79.1	445	77.5	336	68.8	316	67.1	344	67.7	376	66.2
Central Coast	172	69.2	126	68.3	95	75.8	134	67.9	251	62.9	93	54.8
Central Valley	126	69.1	168	69.1	163	67.5	146	64.4	154	50	178	51.7
North Central Valley	149	69.1	159	62.9	135	65.2	143	67.8	135	57.8	140	60.0
Rural No. Calif.	122	63.1	91	75.8	75	62.7	116	67.2	104	64.4	75	70.7

TABLE 7: 4:3:1 VACCINE SERIES COVERAGE LEVELS OF CALIFORNIA KINDERGARTENERS
By AGE CHECK POINTS, 2000-2002

AGE CHECKPOINT	2002 N=2,268	2001 N=2,306	2000 N=1,737
3 months	84.4%	81.7%	81.9%
7 months	62.4	58.9	56.3
12 months	86.8	85.6	83.8
19 months	60.2	58.3	51.6
Two years	72.2	71.0	66.6
Three years	81.2	79.5	76.3

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TABLE 8: 4:3:1 VACCINE SERIES COVERAGE LEVELS OF CALIFORNIA KINDERGARTENERS¹:
BY RACE/ETHNICITY AND ANTIGEN

RACE (N) % of total	FULL SERIES 3 P., 4 DTP, 1 MMR	POLIO (3+)	DTP/Td (4+)	DTP/DT (3+) Not part of "Full Series"	MMR (1+)	HEP B (3+) Not part of "Full Series"	HIB (1+) Not part of "Full Series"
ALL RACES (2,268) ² 100.0%	72.2%	92.8%	79.6%	95.8%	60.2%	43.3%	97.3%
White (651) 31.8%	73.0%	92.0%	73.6%	95.9%	58.8%	46.9%	98.3%
Hispanic (1,170) 44.1%	72.0%	93.3%	81.4%	95.5%	60.8%	40.5%	96.8%
African American (106) 8.1%	64.2%	88.7%	78.3%	93.4%	50.0%	34.0%	97.2%
Asian (241) 10.1%	76.8%	94.6%	72.6%	99.2%	69.3%	54.4%	97.1%
Other (47) 1.9%	68.1%	87.2%	85.5%	91.5%	55.3%	40.4%	97.9%
Unknown (53) 4.1%	66.0%	94.3%	78.7%	94.3%	47.2%	30.2%	96.2%

1. Born in 1996

2. Sample includes 29 children with exemptions

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**TABLE 9: IMMUNIZATION LEVELS OF CALIFORNIA KINDERGARTENERS¹
AT 2ND BIRTHDAY: BY BIRTHPLACE AND RACE/ETHNICITY**

BIRTHPLACE (N=Sample Size)	TOTAL	Non-Hispanic (N)	Hispanic (N)	Other (N)
ALL Birthplaces ² (2,268)	72.2%	72.6% (1,082)	72.0% (1,170)	n/a ³ (16)
SAME COUNTY (1,087)	76.2%	73.4% (432)	78.1% (649)	n/a ³ (6)
OTHER CA (296)	70.9%	70.8% (178)	71.1% (114)	n/a ³ (4)
OTHER US (69)	79.7%	83.0% (47)	n/a ² (22)	n/a ³ (0)
MEXICO (76)	23.7%	n/a ² (0)	23.7% (76)	n/a ³ (0)
OTHER FOREIGN (48)	45.8%	50.0% (44)	n/a ² (4)	n/a ³ (0)
UNKNOWN (692)	72.8%	73.8% (381)	72.1% (305)	n/a ³ (6)

1. Born in 1996

2. Sample includes 29 children with exemptions

3. Percents are not calculated on a base of fewer than 25 children

**TABLE 10: TYPE OF IMMUNIZATION RECORD
PRESENTED AT KINDERGARTEN ENTRY**

RECORD TYPE	Number	Percent
TOTAL	2,268	100.0%
CIR*	1,686	74.3%
Other Immun. Record	110	4.9%
Out-of-State Sch Record	16	0.7%
Medical Record	135	6.0%
CHDP** form	73	3.2%
Other	2	0.1%
Not stated	246	10.9%

* California immunization record

** Child Health and Disability Prevention Program

**TABLE 11: HEPATITIS B VACCINE COVERAGE
LEVELS OF CALIFORNIA KINDERGARTENERS AT
VARIOUS AGE CHECKPOINTS, 2001-2002**

	2001	2002
AGE CHECKPOINT (N = 2,268) ¹	Percent Up-To-Date	Percent Up-To-Date
3 mo. (at least 1 dose)	84.6	87.2
7 mo. (at least 2 doses)	84.3	86.6
12 mo. (2 doses)	88.8	90.7
19 mo. (3 doses)	83.9	85.9
24 mo. (3 doses)	86.2	88.3
3 yrs (3 doses)	90.5	91.8
4 yrs (3 doses)	93.7	94.6
5 yrs (3 doses)	96.8	97.5

1. Sample includes 29 children with exemptions

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TABLES 12-15: 95% CONFIDENCE INTERVALS for TABLES 1-4

Table 12: Percent Up-To-Date at 2nd Birthday for 4:3:1 Vaccine Series by Race/Ethnicity

	2002	95%
RACE	Percent	Confidence Interval
	UTD	
ALL RACES	72.2	70.3 - 74.0
White	73.0	69.6 - 76.4
Hispanic	72.0	69.4 - 74.5
African-American	64.2	55.0 - 73.3
Asian	76.8	71.4 - 82.1
Other	68.1	54.8 - 81.4
Unknown	66.0	53.3 - 78.8

Table 13: Percent Up-To-Date at 2nd Birthday for 4:3:1 Vaccine Series by Age Checkpoint

	2002	95%
AGE	Percent	Confidence Interval
	UTD	
3 mo	84.4	82.8 - 85.9
6 mo	95.5	94.6 - 96.4
7 mo	62.4	60.3 - 64.5
12 mo	86.8	85.4 - 88.3
19 mo	60.2	58.1 - 62.3
all check points	43.3	41.1 - 45.4
24 mo	72.2	70.3 - 74.1
27.5 mo	77.1	75.3 - 78.9
36 mo	81.2	79.5 - 82.9

Table 14: Percent Up-To-Date at 2nd Birthday for 4:3:1 Vaccine Series by Region

	2002	95%
REGION	Percent	Confidence Interval
	UTD	
All Regions	72.2	70.3 - 74.0
L.A. County	72.8	69.3 - 76.3
Other So. Cal	71.5	68.2 - 74.8
SF Bay	79.1	74.8 - 83.4
Central Coast	69.2	62.3 - 76.1
Central Valley	69.1	61.0 - 77.1
No. Central Valley	69.1	61.7 - 76.5
Rural No. California	63.1	54.5 - 71.7

Table 15: Percent Up-To-Date at 2nd Birthday for 4:3:1 Vaccine Series by Antigen

	2002	95%
ANTIGEN	Percent	Confidence Interval
	UTD	
All antigens	72.2%	70.3 - 74.0
Polio	92.8%	91.7 - 93.8
DTP	79.6%	77.9 - 81.2
MMR	85.6%	84.2 - 87.1
Hep B	88.3%	87.0 - 89.6

FIGURES **KINDERGARTEN RETROSPECTIVE SURVEY**

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Figure 1: Kindergarteners Up-To-Date at 2nd Birthday, 1998 to 2002

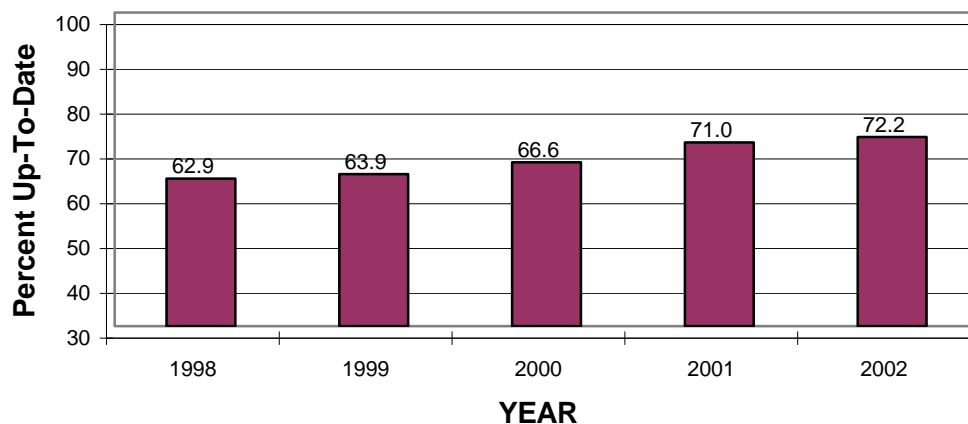


Figure 2: Kindergarteners Up-To-Date at 2nd Birthdate, by Region, 2002

(95% confidence intervals represented by "I" marker bars)

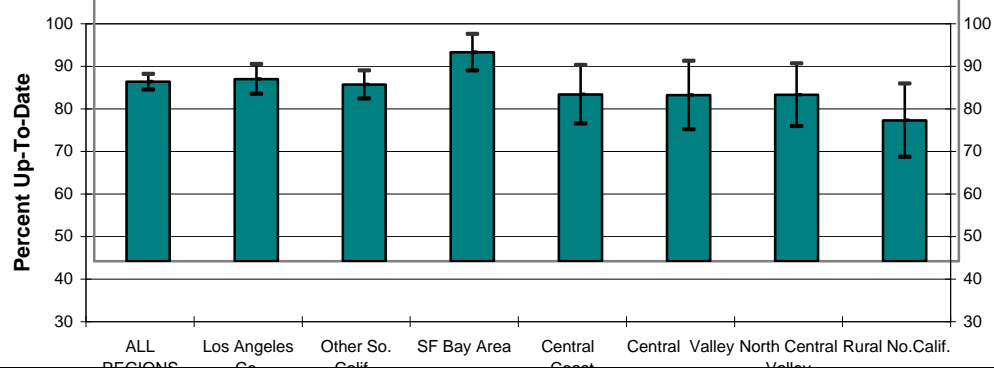
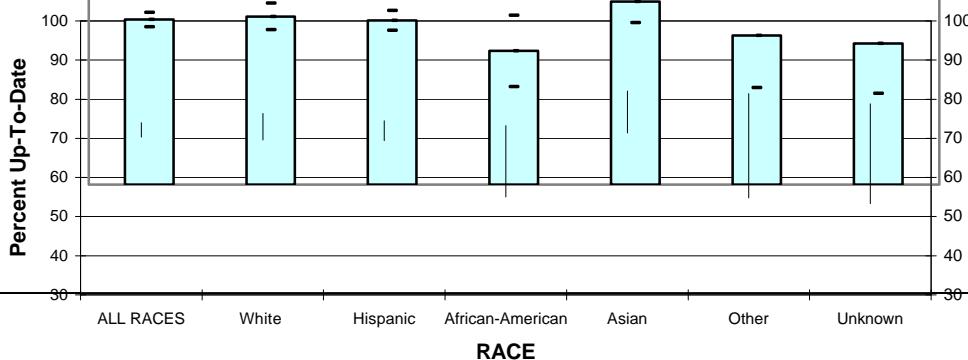


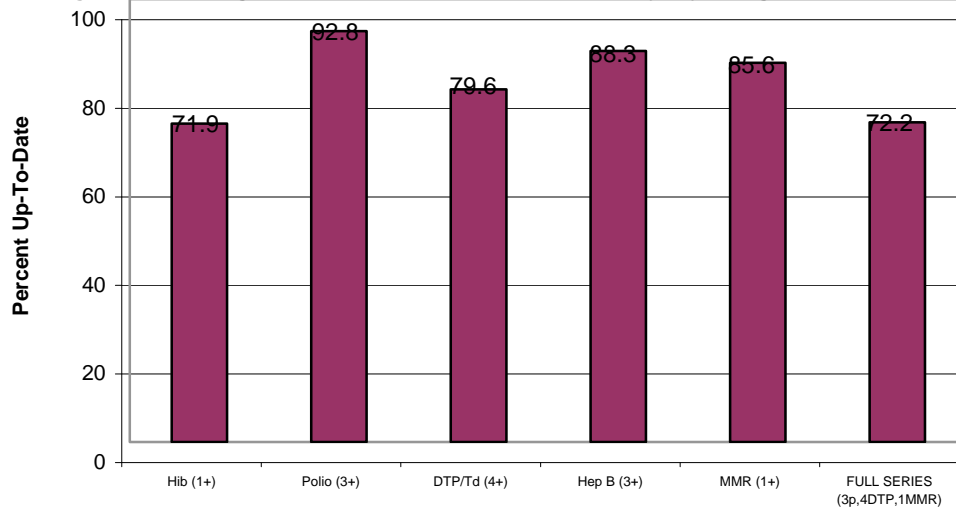
Figure 3: Kindergarteners Up-To-Date at 2nd Birthdate, by Race/Ethnicity, 2002

(95% confidence intervals represented by "I" marker bars)



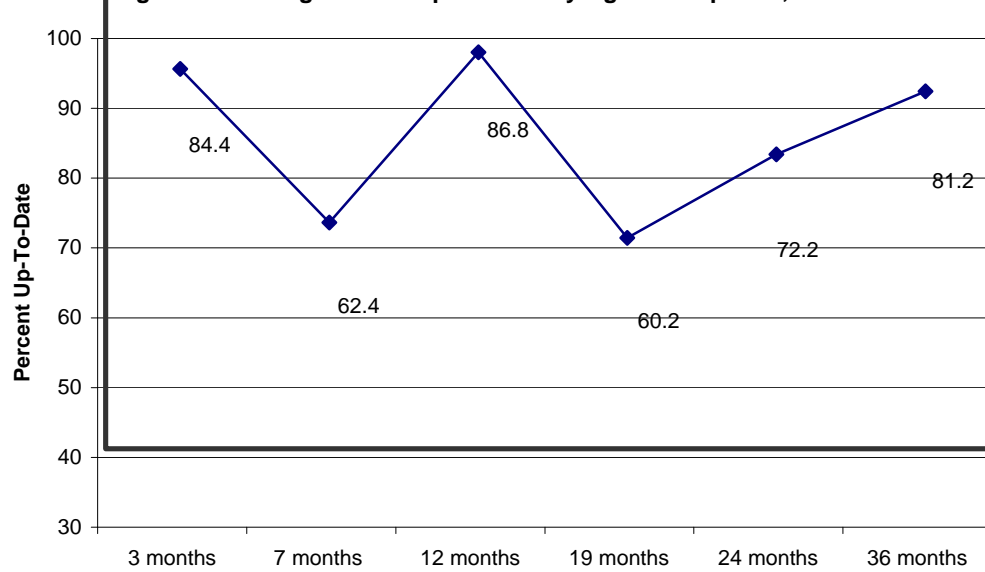
FIGURES
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Figure 4: Kindergarteners Up-To-Date at 2nd Birthday, by Antigen, 2002



ANTIGENS

Figure 5: Kindergarteners Up-To-Date by Age Checkpoints, 2002



CHECK POINTS

**KINDERGARTEN RETROSPECTIVE SURVEY
CALIFORNIA 2002: REGIONAL TABLES**

IMMUNIZATION LEVELS OF LOS ANGELES COUNTY KINDERGARTENERS¹: BY RACE/ETHNICITY AND AGE CHECKPOINT

RACE (N)	3 mo. 1 Polio, 1 DTP	7 mo. 2 Polio, 3 DTP	12 mo. 2 Polio, 3 DTP	19 mo. 3 P., 4 DTP, 1 MMR	utd at all checkpts	24 mo. 3 P., 4 DTP, 1 MMR	3 yrs. 3 P., 4 DTP, 1 MMR
ALL RACES (624)²	84.8%	60.4%	88.6%	60.1%	41.0%	72.8%	81.4%
White (93)	86.0%	75.3%	91.4%	51.6%	41.9%	71.0%	82.8%
Hispanic (420)	83.1%	56.0%	87.4%	62.4%	41.2%	74.1%	81.7%
Asian (63)	90.5%	74.6%	93.7%	61.9%	44.4%	69.8%	77.8%

1. Born in 1996

2. LA County sample represents 27.5% of state's total sample and includes 1 child with exemption. Percents are not calculated on a base of fewer than 25 children, so coverage rates are not available for the following groups: African American, Other and Unknown

**KINDERGARTEN RETROSPECTIVE SURVEY
CALIFORNIA 2002: REGIONAL TABLES**

IMMUNIZATION LEVELS OF OTHER SO. CALIF. REGION KINDERGARTENERS¹: BY RACE/ETHNICITY AND AGE CHECKPOINT
(Imperial Co., Orange Co., Riverside Co., San Bernardino Co., San Diego Co.)

RACE (N)	3 mo. 1 Polio, 1 DTP	7 mo. 2 Polio, 3 DTP	12 mo. 2 Polio, 3 DTP	19 mo. 3 p., 4 DTP, 1 MMR	utd at all checkpts	24 mo. 3 p., 4 DTP, 1 MMR	3 yrs. 3 p., 4 DTP, 1 MMR
ALL RACES (702)²	82.5%	61.1%	84.5%	59.4%	43.3%	71.5%	80.2%
White (211)	85.3%	63.0%	82.5%	59.2%	46.5%	74.9%	82.0%
Hispanic (374)	79.4%	57.0%	83.4%	56.2%	38.0%	67.9%	78.6%
African American (36)	86.1%	50.0%	86.1%	66.7%	36.1%	77.8%	83.3%
Asian (63)	92.1%	84.1%	96.8%	77.8%	68.3%	82.5%	85.7%

1. Born in 1996

2. Other So. Cal Co. sample represents 31.0% of state's total sample and includes 5 children with exemptions. Percents are not calculated on a base of fewer than 25 children, so coverage rates are not available for the following groups: Other and Unknown.

**KINDERGARTEN RETROSPECTIVE SURVEY
CALIFORNIA 2002: REGIONAL TABLES**

IMMUNIZATION LEVELS OF SF BAY AREA REGION KINDERGARTENERS¹: BY RACE/ETHNICITY AND AGE CHECKPOINT
(Alameda Co., Contra Costa Co., Marin Co., Napa Co., San Francisco Co., San Mateo Co., Santa Clara Co., Solano Co., Sonoma Co.)

RACE (N)	3 mo. 1 Polio, 1 DTP	7 mo. 2 Polio, 3 DTP	12 mo. 2 Polio, 3 DTP	19 mo. 3 p., 4 DTP, 1 MMR	utd at all checkpts	24 mo. 3 p., 4 DTP, 1 MMR	3 yrs. 3 p., 4 DTP, 1 MMR
ALL RACES (373)²	87.9%	73.7%	91.4%	66.8%	53.6%	79.1%	86.9%
White (161)	91.9%	80.8%	94.4%	68.9%	58.4%	82.6%	90.7%
Hispanic (77)	85.7%	63.6%	90.9%	66.2%	44.2%	80.5%	87.0%
African American (28)	85.7%	57.1%	75.0%	39.3%	35.7%	57.1%	71.4%
Asian (86)	83.7%	73.3%	93.0%	72.1%	57.0%	79.1%	84.9%

1. Born in 1996

2. SF Bay Area sample represents 16.4% of state's total sample and includes 6 children with exemptions. Percents are not calculated on a base of fewer than 25 children, so coverage rates are not available for the following groups: Other and Unknown.

**KINDERGARTEN RETROSPECTIVE SURVEY
CALIFORNIA 2002: REGIONAL TABLES**

IMMUNIZATION LEVELS OF CENTRAL COAST REGION KINDERGARTENERS¹: BY RACE/ETHNICITY AND AGE CHECKPOINT
(Monterey Co., San Luis Obispo Co., Santa Barbara Co., Santa Cruz Co., Ventura Co.)

RACE (N)	3 mo. 1 Polio, 1 DTP	7 mo. 2 Polio, 3 DTP	12 mo. 2 Polio, 3 DTP	19 mo. 3 p., 4 DTP, 1 MMR	utd at all checkpts	24 mo. 3 p., 4 DTP, 1 MMR	3 yrs. 3 p., 4 DTP, 1 MMR
ALL RACES (172)²	85.5%	64.5%	89.0%	60.5%	41.9%	69.2%	77.9%
White (28)	82.1%	71.4%	92.9%	60.7%	39.3%	71.4%	78.6%
Hispanic (121)	85.1%	62.8%	87.6%	65.3%	47.1%	71.1%	81.0%

1. Born in 1996

2. Central Coast sample represents 7.6% of the state's total sample and includes 4 children with exemptions. Percents are not calculated on a base of fewer than 25 children, so coverage rates are not available for the following groups: African American, Asian, Other and Unknown.

**KINDERGARTEN RETROSPECTIVE SURVEY
CALIFORNIA 2002: REGIONAL TABLES**

IMMUNIZATION LEVELS OF CENTRAL VALLEY REGION KINDERGARTENERS¹: BY RACE/ETHNICITY AND AGE CHECKPOINT
(Fresno Co., Kern Co., Kings Co., Madera Co., Merced Co., Tulare Co.)

RACE (N)	3 mo. 1 Polio, 1 DTP	7 mo. 2 Polio, 3 DTP	12 mo. 2 Polio, 3 DTP	19 mo. 3 p., 4 DTP, 1 MMR	utd at all checkpts	24 mo. 3 p., 4 DTP, 1 MMR	3 yrs. 3 p., 4 DTP, 1 MMR
ALL RACES (126)²	82.5%	49.2%	83.3%	57.1%	33.3%	69.1%	78.6%
White (40)	75.0%	47.5%	70.0%	37.5%	27.5%	47.5%	62.5%
Hispanic (72)	87.5%	51.4%	93.1%	66.7%	36.1%	79.2%	87.5%

1. Born in 1996

2. Central Valley sample represents 5.6% of the state's total sample and includes 4 children with exemptions. Percents are not calculated on a base of fewer than 25 children, so coverage rates are not available for the following groups: African American, Asians, Other and Unknown

**KINDERGARTEN RETROSPECTIVE SURVEY
CALIFORNIA 2002: REGIONAL TABLES**

IMMUNIZATION LEVELS OF NORTHERN CENTRAL VALLEY REGION KINDERGARTENERS¹: BY RACE/ETHNICITY AND AGE CHECKPOINT
(Sacramento Co., San Joaquin Co., Stanislaus Co.)

RACE (N)	3 mo. 1 Polio, 1 DTP	7 mo. 2 Polio, 3 DTP	12 mo. 2 Polio, 3 DTP	19 mo. 3 p., 4 DTP, 1 MMR	utd at all checkpts	24 mo. 3 p., 4 DTP, 1 MMR	3 yrs. 3 p., 4 DTP, 1 MMR
ALL RACES (149)²	84.6%	56.4%	83.9%	57.7%	39.6%	69.1%	78.5%
White (52)	90.4%	63.5%	88.5%	65.4%	50.0%	76.9%	78.9%
Hispanic (73)	80.8%	53.4%	80.8%	57.5%	37.0%	65.8%	78.1%

1. Born in 1996

2. North Central Valley sample represents 6.6% of the state's total sample and includes 4 children with exemptions. Percents are not calculated on a base of fewer than 25 children, so coverage rates are not available for the following groups: African American, Asian, Other and Unknown

**KINDERGARTEN RETROSPECTIVE SURVEY
CALIFORNIA 2002: REGIONAL TABLES**

IMMUNIZATION LEVELS OF RURAL NO. CALIF. REGION KINDERGARTENERS¹: BY RACE/ETHNICITY AND AGE CHECKPOINT
(Alpine Co., Amador Co., Butte Co., Calaveras Co., Colusa Co., Del Norte Co., El Dorado Co., Glenn Co., Humboldt Co., Inyo Co.,
Lake Co., Lassen Co., Mariposa Co., Mendocino Co., Modoc Co., Mono Co., Nevada Co., Placer Co., Plumas Co., San Benito Co.,
Shasta Co., Sierra Co., Siskiyou Co., Sutter Co., Tehama Co., Trinity Co., Tuolumne Co., Yolo Co., Yuba Co.)

ALL RACES (N)	3 mo. 1 Polio, 1 DTP	7 mo. 2 Polio, 3 DTP	12 mo. 2 Polio, 3 DTP	19 mo. 3 p., 4 DTP, 1 MMR	utd at all checkpts	24 mo. 3 p., 4 DTP, 1 MMR	3 yrs. 3 p., 4 DTP, 1 MMR
ALL RACES (122)²	82.0%	63.9%	81.2%	50.8%	39.3%	63.1%	79.5%
White (66)	78.8%	63.6%	80.3%	50.0%	39.4%	59.1%	72.7%
Hispanic (33)	90.9%	72.7%	90.9%	57.6%	45.5%	72.7%	93.9%

1. Born in 1996

2. Rural No. Calif. Sample represents 5.4% of the state's total sample and includes 5 children with exemptions. Percents are not calculated on a base of fewer than 25 children, so coverage rates are not available for the following groups: African Americans, Asians, Other, and Unknown